when the deposition rate is 8 angstroms/sec, since the deposition time is long, device degradation also occurs by heat radiation as is the case described above. As a result, the deposition rate is also limited, and hence, it is required to have 8 angstroms/sec or more.

As the second sealing layer 8, for example, a transparent heat curable epoxy resin or a photocurable epoxy resin is used. In particular, a heat curable epoxy resin is preferable, and more particularly, coating thereof is performed by dipping, a glass substrate, which is the sealing substrate 9, is placed thereon, and curing is then performed in an inert atmosphere, thereby forming the sealing layer. As the epoxy resin, a moisture-proof resin, such as DPpure60 (manufactured by 3M), or STYCAST1269A (Emeron), may be mentioned.

Hereinafter, the present invention will be described in detail with reference to examples.

(Example 1)

An organic EL device having a structure shown in Fig. 1 was formed.

Operations described below were all performed in a clean room.

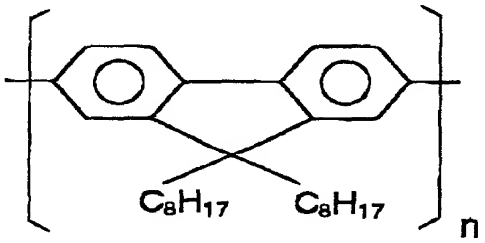
On a washed glass substrate 1 of 150 mm square, an (transparent) electrode (anode) 2 (IDIXO) having 1,000 angstroms thick was formed by sputtering. The conditions therefor were; a degree of vacuum of 1×10^{-4} Pa or less, an Ar to O2 flow ratio of 10 : 1, 320 V, 0.15 mA, and 14 minutes. Next, an oxygen plasma treatment was performed on the anode film formed on the glass substrate at a current of 10 mA for 5 minutes. In particular, VPS020 manufactured by Sanyu Electron Co., Ltd. was used, and the treatment was performed after purging were performed 2 to 3

times using oxygen.

Subsequent operations described below were performed in a glove box. The conditions in the glove box were such that the oxygen concentration was 0.01 ppm or less, and a dew point of water was - 70°C or less.

First, a mixture of PEDOT (polyethylenedioxy-thiophene) and PSS (polystyrene sulfonate) was applied as a hole injection/transport material on the electrode 2 processed by the plasma treatment described above. The mixture described above could be obtained from Bayer A.G. as Baytron P. In this example, a solution was formed by mixing Baytron P with PSS in a ratio of 5 : 1 and by diluting the mixture with water to 1.5 times, and by using the solution thus obtained, a film was formed by spin coating. Under conditions, such as a slope of 1 second, 3,000 revolutions, and 45 seconds, a film 600 angstroms thick was formed. By firing the film at 200°C for 10 minutes, film formation was performed, thereby yielding a hole injection/transport layer 3.

Next, on the hole injection/transport layer 3, a solution of a fluorene-based polymer having a structure shown below dissolved in a xylene solvent was applied by spin coating so as to have a film thickness of 800 angstroms, thereby forming a light-emitting layer 4.



Subsequently, on the light-emitting layer 4, first, a film formation (deposition) of Ca was performed in a vacuum deposition apparatus so as to form a first cathode 5. The vacuum deposition apparatus disposed in the glove box was used. The degree of vacuum at the beginning was approximately 1×10^{-6} torr. The deposition rate was set to be 3 angstroms/sec, and the film thickness was set to be 70 angstroms. Next, after the degree of vacuum again reaches 1×10^{-6} torr, a film 10 having angstroms thick was formed as the second cathode 6 by depositing Al at a deposition rate of 3 angstroms/sec.

Next, on the second cathode 6, as a first sealing layer 7, a film having 500 angstroms thick was formed by depositing LiF at a deposition rate of 8 angstroms/sec.

After cooling, on the first sealing layer 7, DPpure60 (manufactured by 3M) was applied (film thickness, 200 μm) which was a moisture-proof epoxy resin, thereby forming a second sealing layer 8. A sealing glass (thickness, 0.3 mm) was then adhered thereto as a sealing substrate 9, and compressing was performed by a hot plate under conditions, at 50°C for 12 hours, whereby curing was performed. In this step, in order to remove air bubbles in the epoxy resin, heating was performed at a degree of vacuum of approximately 0.1 torr. As a result, an organic EL device was obtained.

For the organic EL device thus obtained, the transmittance and the threshold voltage were measured. The measurement of the transmittance was performed by using a spectroscope (manufactured by Hitachi, Ltd.), in which air was used as the base line, and a pinhole of 3 mm in